Web Design 101

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The Web is a communication tool

- Research background company information
- Understand how the organization works
- Know the web audience
- Always think of the user

A word on metaphors

Getting Started

- Develop a hierarchy for your site
- Decide who is responsible for content and updating
Creating a web can be fun and challenging. It can also be frustrating if you do not know all the tricks of the trade. The following is an overview of all the basics that need to be made when creating a web site.

The first and most important aspect of web design is to know your client and their web user.

Research what the business or department does, who they interact with, and pay attention to the image or look that they currently portray. Even if you think that the current image isn’t attractive or fun, get an idea of WHY they have chosen this look before you suggest or make changes.

The web can be a powerful and easily accessible medium but above all it is a communication tool between the business or department and their web user. Your client understands this otherwise they wouldn’t want a website. Organize your site in a way that is easy for the user. Avoid mimicking patterns of your internal office scheme if it can be helped. Eliminating internal jargon will be easier to read through and navigate for the user. This can be done simply by labeling hyperlinks with broad terms. Use common names not technical or scientific ones. Technology, plug-in, and flashy scripting available to “enhance your website” are one of the most tempting things to add to your page. This definitely can hinder communication. Always ask yourself when you are tempted by the bells and whistles of technology: will this enhance my site or do I want to add this because it is fun for me to create? If it enhances or helps your site by all means use the technology, but keep in mind you might leave some users behind. Do not turn your page into a technology junkyard.

Using a metaphor as a basis for navigating and designing a web site was a popular idea at one time. For example, basing your site on a visual concept like a train station and then using this visual idea as a navigational feature. The user might go to the ticket window to seek information or board the train to go to different page. Studies have shown that is a bad way to navigate a website. It found that people do not always get the metaphor. Make things as clearly stated as possible unless your site is being used purely as entertainment.

Make a small diagram to show how you want your web to be laid out. Start with the main page at the top or side then draw arrows or lines connecting pages showing the hyperlink or navigation patterns of your web. This chart is the hardest part of the web design process but it is the greatest tool to help you see what all is involved in putting together a web site. The chart serves as a great reference to you and helps to communicate to others involved with the project the architecture of the site. It also serves as a reminder to keep the purpose of the web in check.

If you are stuck with reorganizing an existing web make chart of the existing layout (hierarchy) to see what the navigation patterns are and what content you have. Then assess what changes need to be made.

Keep in mind that users do not always come into your site from the homepage. With search engines they might find a page deep into your site. Have a navigation system on every page that allows the users to get back to the major pages in your web site.

Once you have made your chart will discover what kinds graphics and images might be needed, how many buttons you might use, and who is responsible for generating the content for the different sections of the web.
Constraints of the delivery medium

- Browser Window
- HTML table
- Bandwidth

Grid of the html table

- Sketch a thumbnail of the webpage
- Remember table cells need to break up into even increments
- Break up (slice) images to fit the grid

Working with tables

- If you do not have Photoshop, Fireworks or a way to slice images, design with the grid

Inside vs. outside pages

- The opening page is more for Introduction and links
- Avoid SPLASH pages, have site navigation on the opening page
- Inter pages are more for specific content
- These pages should be similar but different
The browser is part of your web environment. You cannot view a webpage without one. So first of all you have to realize the size and layout have to fit within those constraints. Decide what screen resolution you are designing for and then design your layout with the proportionate dimensions of the screen resolution. Some tips to consider when deciding on a screen resolution: always avoid making the user scroll sideways (from right to left and left to right), and the homepage should fit within the opening browser window and should not involve scrolling. Scrolling up and down on the inside pages is acceptable within reason. For example do not have your user scroll more than two or three screen lengths otherwise there is too much content for one page.

The second consideration of web design is how to layout your page within the grid system of a table, most widely used for layout. Sometimes a fantastic design on paper is very cumbersome to make happen on the web.

The last consideration is bandwidth. When choosing components of the web page be lean and friendly with objects such as pictures, multimedia, and sound. The more pictures, video, and sound equals more download time and an unhappy web user.

Sketch out a rough drawing of what you want your page to look like. Add your hyperlinks, and all other necessary info in the sketch to see how your page will be filled.

When coming up with an idea keep in mind the following points. First, table cells in HTML always have to break up in even segments. This can give you problems with placement of graphics and text. Knowing the HTML language will help you to know what is possible and what is not. You might even have to reevaluate your ideas according to your skill level.

Second, you have to decide if you want to follow the boxy shape of the table and browser or contrast the box with curves and organic shapes. Going with the curvy shapes is a nice break from the angled web but also takes more skill to design. Fitting irregular shapes into a grid system can be done by slicing the shapes. This breaks up graphics and decreases download time because the browser only has to render small graphics instead of one large one. Adobe Image Ready (comes with Photoshop) or Macromedia Fireworks are great software programs for slicing up graphics.

Finally, try and see if you can fit your design into a grid.

Examples of how to accomplish designs within HTML tables.

I usually have a design for the opening page and a complementary design for the inside pages that allows more space for content. The opening page is for Introduction and links. Inter pages are for specific content. For example, if you were introducing yourself to someone you would not tell them your whole life story all up front. You would give them an overview then as they got to know you would give them more information based on questions. Similar to a web page. The opening page is an overview with doors (hyperlinks) to more information.

Keep you layout and navigation in the same place from page to page to insure that the user understands how to navigate your site. Consistency is a key point to web design. You also want the user to understand when they come into your site and when they leave. You do not want every page within you site a different color and theme.

Think of a software program you use very day. The application always contains menu bar on across the top of the screen. You know that in the file menu you can choose functions such as print and save, etc. Web navigation changes on every site you visit. It does not have the built in consistency of a software program. Make navigation friendly and obvious to your user. Avoid using hyperlinks in the body text of the page for navigation. The user will not intuitively find those links. An appropriate use of links in the content of a page would be for contextual use such as glossary definitions, references, etc.
**Five tricks of the trade**

1. Provide visual navigation and accessibility aids
2. Design for easy scanning
3. Be concise
4. Be consistent
5. Convey credibility

**Building a visual navigation Structure**

- Who are you? Anchor your logo

- Section your site with a navigation bar

- Left navigation is secondary to top navigation
Building a visual navigation Structure

- Add tertiary navigation menus as necessary

- A good slogan answers “Why am I here?”

- Add a focal point: graphic, pull-quote, or headline

- Works on even the toughest sites
How do we read on the Web?

• Reading rates 25-40% slower
• Monitor's flicker causes eyestrain
• Almost 80% of readers scan text
• Readers scan a page for 10 seconds then move on

Design for Easy Scanning

• Reserve blue and underline for links
• Use sans serif fonts at smaller sizes
• Use color or icons to help convey message, but don't rely on them
• Beware "Mystery Meat" navigation

Design for Easy Scanning

• Use headlines and lists liberally
• Write "Lite". Use 50% fewer words than print (same great taste, less filling)
• Use embedded links sparingly
• Group links of similar "weight"

How much has the Web changed the face of enterprise application development? Let us count the ways. Start with HTML, pervasive clients, fat servers, distributed architectures, and application servers. Move to object messaging, server-side components, decoupled frameworks, and enterprise information portals. And let's not forget the year's big buzzes: eXtensible Markup Language (XML), enterprise application integration (EAI), electronic data interchange (EDI), and global supply chain optimization.

Five tricks of the trade

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**Color**

- Limit your color palette to three or four choices
- Use mostly desaturated colors
- HTML color palette (216 colors) renders the same from computer to computer
- Use white space for breathing room

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**Desaturated vs. Saturated**

- Desaturated colors are more appealing, soothing and professional.
- Using many fully saturated colors is hard on the eyes.
- Using limited amounts of saturated color works nicely.

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**Graphics**

- Optimize!
- Keep graphics small
- Use the correct file format
- Slice images when appropriate
- Try using some solid areas of hexadecimal color (ex. CCFFCC)
- Use alt tags

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**Cascading Style Sheets**

- Style sheets (CSS) separate content from presentation
- Help users with disabilities
- Helps you to make global changes
Color is a very subjective consideration, but it can definitely make or break your website. The best advice that I can give is to limit your color palette to 3 or 4 colors, use mostly desaturated colors, and let there be white space.

A color palette (color choices) of about 3 or 4 help the viewer to focus and not to suffer from information overload (isn’t that what the web is all about?) and also gives you some parameters to design within. Believe it or not total freedom is an artist’s worst nightmare. There is nothing worse than a blank sheet of white paper that you are supposed to create something out of with no constraints. It is best to set some boundaries to start with.

As for color choices ones that are desaturated are more pleasing and not so harsh to the eye in general. Desaturated colors are ones that are softer and seem to have a fog or a gray film over the top of them. As you can see from the visibone web palette that web colors are pretty harsh. There are few colors that are soft. Just remember if the web palette is used your graphics will be consistent in color across all platforms. If you choose not to go this route, test your colors for contrast and value on several systems.

Let there be white space! I strongly recommend leaving some room for the web user to breathe. White space is the space on a page that is not used up by content or graphics, it does not have to be white!!! White space is margins in a document, room between columns in a newspaper or magazine, or solid areas or color or pattern. If words in a book went from one side of the page to the other without a margin the document would be really hard to read! To decide what to place on your web page think of your page as real estate. You have pay for every item you insert. Larger the item the more the cost just like ads in a magazine. If you actually had to pay for each part of the grid you would only put the most important information up. Although you do not want your web page user to not be able to find information you want to limit their choices as guide them through your site with ease. As we say in the art world less is more!

Using desaturated colors or limiting your use of saturated ones gives your pages a cleaner look.

Optimize! Optimize! Optimize! Learn and understand resolution on the web. Screen resolution is very small 72 dots per inch (dpi) or pixels per inch. You do not want to save your graphics at high resolution and put them on your website, this causes your page to load slowly. Similarly, create your graphics at the size you will be using them. Use a 72 dpi image that is 10 inches by 8 inches that only needs to be 2 inches by 1.5 inches is creating a larger download time as well. Research shows that a user will only wait for a page to load for about 10 seconds then they get frustrated and leave (pg. 61 Web Design by Thomas Powell). This is not much time!

Get to know your photo or graphics editor and learn to make your graphics and photos as small as possible without distorting the image. You will also need to understand the different file types for the web jpg and gif. Jpg was created for saving photographs and gif was created for saving graphics with flat color. Gif format also allows for transparency but jpg does not. Choosing the correct format will help with download time and also help the display of your images. This is essential knowledge for web design.

Slice or break up larger graphic and put them back together (like a puzzle) in your web page when appropriate. This smaller downloads make web graphics faster than one large graphic. Reusing your graphics also helps with download time. If you use the same logo on every page of your site the web browser only has to download it once. Then the browser remembers or caches the graphic to memory. I strongly recommend graphics on websites, plain text on a page is extremely boring, but when choosing graphics be selective.

Besides graphics just using some solid areas of HTML hexadecimal color is a nice way to enhance your site without adding to the download time. Another trick to enhance your site is to be the background of your pages with a small feature graphic. Just make sure that the texture is light or dark enough so the viewer can read the content of your site.

Another tip to great graphics is using alt tags. This is a text representation of the graphic image that solves 80% of users with disabilities problems with using the World Wide Web.

Cascading Styles Sheets (CSS) are a great way to separate content from presentation on your web site. CSS is also American Disability Act (ADA) web compliant. CSS can control the fonts, colors, and other presentation items on your site without using tags such as the font tags that hinder the use of your site for people with disabilities using browsing tools like as screen readers. CSS is fairly easy to learn and once implemented it allows you to make global changes to your website in one place without going to every page in your site to change colors and fonts. My favorite CSS tutorial is on the w3schools site (http://www.w3schools.com).
Just when you thought you were done

- Make sure your navigation is consistent (and not broken) from page to page
- Test your site in different browsers and versions
- Maintain your site

Resources for web design:

- Tutorials on HTML, CSS, Javascript you name it- W3Schools- http://www.w3schools.com
- Web Design Tips- http://www.colin.mackenzie.org/webdesign/
Make sure your navigation is consistent and works on every page. Broken hyperlinks is a very easy mistake to make when working on a web page, but if the user cannot navigate your page say goodbye.

Test your page in all major browsers and several different versions. It should display pretty consistently.

Update your pages on a regular basis. There is nothing worse that going to a website that was last updated three years ago.